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The U. S. population is becoming more ethnically diverse and at a rapidly increasing rate. In 1990, according to the U.S. Census Bureau (2003), the population consisted of 248,709,873 people: of this population 80.2% were white, 12% Black, 9% Hispanic, 2.7% Asian, and .8% American Indian. As of 2003, there were estimated to be approximately 288,368,698 people, with whites now only 75.1% of the population. The largest minority group is now Hispanic (12.5 percent), followed by blacks (12.3 percent), with Asians making up 3.6% percent and American Indians .9% of the population (Chronicle of Higher Education, 2003-4).

College enrollments are also becoming more ethnically diverse as a result of these changing patterns. According to the United States Department of Education (1998), in 1990 there were 13,621,000 students enrolled in higher education in the United States; of that number, 77.5% were white and 19.5% were minority (numbers do not add to 100% due to international student enrollment). Of the 19.5% minority students enrolled in higher education in 1990, 9 percent were black, 5.6 percent Hispanic, 4 percent Asian and .7 percent American Indian.

Now, according to the U.S. Department of Education (2000) as of the 2000 academic year whites made up only 68 percent of the students enrolled in higher education, and minorities made up 32 percent of college enrollments. Of the 32 percent of minority enrollments in 2000, blacks made up 13 percent,

Hispanics 12 percent, Asians 6 percent and American Indians 1 percent. Clearly, greater diversity is becoming a major feature of American life, and higher education and can only avoid coming to grips with these shifting patters at its own peril.

Although minority students are entering college at a higher rate then in previous years, they continue to leave at a higher rate then nonminorities. The data is quite revealing. The Consortium for Student Retention Data Exchange (CSRDE) is sponsored by the Center for Institutional Data Exchange and Analysis at The University of Oklahoma, which consists of over five hundred four-year colleges. The CSRDE (2002) data for first-year retention rates of students entering four-year colleges in 1999 reveal the following: for all types of institutions, regardless of selectivity, whites were retained from the first year to the second year at an 80.3 percent rate; blacks were retained at a 74.7 percent rate, Hispanic students at a 75.7 percent rate and American Indians at a 67.2 percent rate. Asian students were retained at an 86.9 percent rate- the highest persistence rate of any ethnic group.

When looking at the CSRDE (2003) six year graduation rates for student who began college in the fall 1994 semester, we find that for whites 56.9 percent graduated within six years, compared with 41.7 percent of black students, 41.7 percent of Hispanics, and 35.8 percent of American Indians. Again, Asian students not only persisted at the highest rate but graduated at the highest rate (61.1 percent). The correlation between first-year retention rates and six year graduation rates of ethnic groups is also obvious.

Consequences of the Leaking Pipeline

Attrition results in a severe loss of resources by society, by students and by colleges that spend to provide programs and services to help retain and graduate students. When a student leaves college prematurely, any debt incurred must be repaid, despite the failure to graduate, and the college loses future funding in the form of tuition and fees and auxiliary services (bookstore, food service, and so forth) generated over time. The surrounding college community that supports the college, restaurants, movie theaters, and so on, also suffers an adverse economic impact when students leave. In addition, students may be turned off to the educational system in general, never returning to benefit from educational opportunities that may have helped with job attainment, enhancement or advancement. College graduates also earn more money over a lifetime, incur fewer health problems, suffer less penal involvement, and live longer than non-college graduates.

Governmental Involvement

With the escalating cost of higher education tuition and fees and the federal and state government's increased expenditures to higher education through financial aid programs, retention has become an important issue. Governmental agencies want to be sure that the money they are investing in higher education is producing results, that is, that those receiving the aid were receiving an education that would help them get jobs and put money back into governmental coffers through taxes. College graduates earn $1.2 million more in a lifetime then high school graduates. Thus college graduates will pay back to

the federal and state government many times more in taxes, savings, and spending then non-graduates over their lifetimes.

Governments are demanding to know what is being done with the dollars they give to colleges and universities. They are beginning to assert greater control through legislation to make sure that these dollars are being spent wisely. At both the federal and state level, for example, accountability laws or programs are rapidly coming into effect. Colleges are being asked for data that demonstrate that students are completing degrees in specific time periods. In addition governmental agencies are asking colleges to demonstrate that students are learning what is being taught. The age of accountability is upon colleges; but it appears to be more stident in the current environment of tuition deregulation and fiscal shortfalls.

Retention Literature

Retention literature in the United States goes back to at least the beginning of the twentieth century. From the beginning, researchers were interested in retention and attrition and its effects on students and colleges. However, it wasn't until the emergence of mass higher education following World War II, with its burgeoning enrollments and diverse populations, that retention and attrition studies developed models that offered solutions to individual problems. In 1971 Spady's developed a useful model, which concluded that personal attributes interact with environmental influences. The interaction of these personal attributes and environmental influences, and their introduction or removal, gives the student opportunities for successful

assimilation into the social and academic systems of an institution. A student's decision to either remain or withdraw is influenced by the rewards found within these systems (Spady, 1971; Terenzini & Pascarella, 1977; Bean, 1985).

But it was not until 1975 with the publication by Vincent Tinto of his seminal article "Dropouts from higher education: A theoretical synthesis of the recent literature" in *A Review of Educational Research*, that a theoretical framework was finally articulated to explain student leaving behavior from higher education. The Tinto model took a sociological approach to the issue and posited that it was the interaction between the two variables- the college and student- which influenced staying or leaving behavior. Since its initial publication, the Tinto model has become the most widely accepted and emulated theoretical model concerning student attrition from higher education. It should be noted that one flaw of the Tinto model was that it was designed for the traditional-age, largely white students right out of high school- the student who is still most likely to be recruited by four-year colleges and universities.

The Tinto (1975, 1987, 1993) retention model posits that individual pre-entry college attributes (family background, skill and ability, prior schooling) form individual goals and commitments; the individual's goals and commitments then interact over time with institutional experiences (the formal and informal academic and social systems of an institution). The extent to which the individual becomes academically and socially *integrated* into the academic and social systems of an institution determines the individual's departure decision. Or in

other words, the extent to which a student is integrated into the formal and informal academic and social systems of a college determines leaving behavior.

Positive experiences and interventions will reinforce persistence through heightening of individual intentions and commitments whereas negative experiences will weaken intentions and commitments. *Intentions* can include wanting to earn a degree in a particular field of study while *commitment* is the student's desire to complete that degree and willingness to spend the time and energy necessary to obtain it. Thus the greater the individual student's levels of integration into the social and academic systems of the college, the greater his or her subsequent commitment to the college and the more positive the retention rate (Baumgrat & Johnson, 1977; Terenzini, et al. 1981; Pascarella, et al. 1986).

Pascarella, Duby, and Iverson (1983) further tested the Tinto model in a non-residential university setting. These authors found a positive influence concerning the central concept of the model, in particular, as it related to academic integration. Regardless of the type of post-secondary institution attended, then, it seems evident that persistence is predicted to a significant extent on the individual's attaining sufficient levels of structural integration (the extrinsic reward of grades) and normative integration (the intrinsic reward of intellectual development) in the institution's academic system (p. 96). The key component, then, appears to be the introduction of positive influences and the removal of negative influences.

Tinto (1987), in his explanation of the model states the following,

> Persistence requires that individuals make the transition to college and
> become incorporated into the ongoing social and intellectual life of the

college. A sizable proportion of very early institutional departures mirror the inability of new students to make the adjustment to the new world of the college. Beyond the transition to college, persistence entails the incorporation, which is integration, of the individual as a competent member in the social and intellectual communities of the college. (p. 126)

He continues,

Student institutional departure is as much a reflection of the attributes of those communities, and therefore of the institution, as it is of the attributes of the students who enter that institution. It is the daily interaction of the person with other members of the college in both the formal and informal academic and social domains of the college and the person's perception or evaluation of the character of those interactions that in large measure determine decisions as to staying or leaving. (p. 127)

According to Terenzini and Wright (1987), building on the Tinto findings states began asking colleges to examine the influences they exert on students and to document the validity of their claims about student learning and development. The study they conducted focused on the influence of students' academic and social integration levels on *reported* academic skills development over a four-year period. This study was conducted at a large public research university in the Northeast. The findings showed that, ". . .the results of this study offer reasonably strong support for the construct validity of the main components of Tinto's (1975) model of college student attrition and for its utility in the study of other student outcomes. . . . The results obtained in this study were consistent with theoretical expectations." (p. 175) (see Figure 1.1).

The findings of the study relating to academic and social integration indicate that academic integration in one year was consistently, positively, and

reliably related to academic integration in succeeding years, and social integration levels in one year were similarly and consistently related to subsequent levels of social integration.

The notion of "student involvement" as expressed by Astin (1985) also supports the works of Terenzini and Wright concerning the importance of early, strong integration. "Student involvement" refers to the amount of physical and psychological energy that a student devotes to the academic experience. Astin believes that the highly involved student who devotes considerable energy to studying, participates in student organizations, and interacts frequently with faculty members, is more committed to the institution. Thus, *the more committed to the institution, the higher likelihood of success.* Therefore anything positive that is done to enhance a student's commitment to a goal and to the institution should further enhance his/her social and academic integration, and therefore promote retention. It follows that strong student integration early, with energetic student involvement and commitment, leads to greater success of students being retained and should be promoted.

The ACE-UCLA (American Council on Education- University of California Los Angeles) Cooperative Institutional Research Program (CIRP) has collected data on a national scale on first-year college students since 1965. The purpose of these longitudinal studies is to assess the students' experiences during the undergraduate years and to determine how different kinds of college environments influence student development (Astin, Korn, and Green, 1987). A wealth of data that is collected on students each year that goes beyond retention

and attrition information.   Student attitudes and other data are collected and

should be of interest to colleges and universities. The data are now available to

colleges and universities that participate in the study. Data can also be obtained

showing the responses of a particular campus and comparisons with peer

institutions.

The CIRP data include measures of student satisfaction with their college

experience. Some of the data are revealing: after two years in college,

undergraduates appear to be least satisfied with personal services such as

career counseling and advising and academic advising among others. Astin,

Korn, and Green (1987) conclude:

> The low rating given to academic advising is of special concern, given that
> advising is probably the principal tool for helping students get involved in
> their studies. Involvement, in turn, is probably one of the key elements in
> student achievement and retention. (p. 41)

They continue:

> They [students] are least satisfied with personal services. . . Considering
> the key role that academic advising can play in student involvement and
> retention, the low rating given to this important activity by students should
> be a cause for concern. (p. 42)

Involvement and advising, then, are crucial components for developing

and sustaining a successful retention program. It can be inferred from the CIRP

data that the more satisfied the student is with the overall college experience, the

better the chance for the student's success academically. Thus, satisfaction with

one's environment leads to increased academic success. And some items make

a greater contribution to retention than others; these items can be pinpointed

using the individual campus CIRP data and improved where needed.

The National Survey of Student Engagement (NSSE) is another instrument available to annually collects information from undergraduate students. The information can be used by colleges and universities to help improve student learning. The survey results provide comparative benchmarks to colleges and universities for determining how effectively they are contributing to student learning in five areas: 1) level of academic challenge, 2) active and collaborative learning, 3) student- faculty interaction, 4) educational experiences that are enriching, and 5) supportive campus environment (National Study of Student Engagement, 2001)

Results of the first two years of the NSSE study show promising findings, which included the following:

> Almost all students (98%) at least "occasionally" ask questions in class or contribute to class discussions. Most students (90%) worked at least "occasionally" with other students on projects during class. Many institutions provide first-year seminars, service learning, research opportunities, capstone experiences, and other activities to increase the frequency of student-faculty interaction. Two-thirds of all seniors are involved in community service and volunteer work and 72% participate in internships. Half of all first-year students and seniors frequently have serious conversations with students from different racial and ethnic backgrounds. Most students say their academic advising is either "good" (43%) or "excellent" (27%). p. 3

In addition to these positive findings, the summary of the first two years survey results reveals the following disappointing results (National Study of Student Engagement, 2001):

> About one-fifth of both first-year students and seniors say their institution gives little emphasis to studying and spending time on academic work. Almost half (45%) of the first-year students surveyed never discussed ideas from their classes or readings with a faculty member outside of class. Commuter students and part-time students view their campus environments as less supportive. African-American and Asian-American

students are less positive about their relationships with other students and with faculty members (p. 3).

The study conducted by Umback and Kuh (2003) of liberal arts colleges suggest that although these types of colleges enroll less diverse student populations then other types of colleges, diversity experiences enhance the educational experience of all students. In addition, numerous studies are summarized that show experiences with diversity appearing positively associated with retention rates and degree aspiration of students. The authors (Umback and Kuh, 2003) state:

> Rather, institutions must intentionally create opportunities for interaction, present diverse perspectives in the classroom, and find other ways to communicate the value of diversity and support the academic and social needs of students from different backgrounds. In the context of liberal arts colleges, most of which tend to be relatively small, apparently the magnitude of the number of students from different backgrounds does not matter as much to deriving the benefits of diversity experiences as does the quality of interactions across differences that the campus environment encourages and nurtures (p.16).

Diversity, then, provided benefits to the retention of all students, but some groups more than others, and most of the colleges in the study *promote* the interaction among all ethnic and racial groups through learning communities and the active participation in activities such as intergroup dialogues.

Blustein and others (1986) added another variable suggesting that students who have unfocused career goals seem to feel less involved with their education and their institution. Also they tend to have greater difficulty performing effectively in academic settings. The results of the findings of their study of community college students concluded:

Enhancement of the academic integration of commuter students and other non-traditional students whose actual contact with the institution is minimal. . .may be achieved by improving study skill, focusing on educational goals as a means of personal and vocational fulfillment, and helping students to gain the skills needed to interact in an academic setting (p. 248).

Thus in environments such as distance education, where academic integration is less possible, the introduction of activities that help produce clear educational goals can enhance retention. Blustein's findings appears consistent with the CIRP data showing that students were dissatisfied with career counseling and advising, and academic advising; those students who do not clearly focus on a career goal will more likely to leave a college. So a clear connection between poor career and academic counseling, no defined career goal, and student attrition can be established. Colleges should take the earlier clarification of student educational goals seriously. If a student applies and is accepted into the college but is undeclared or undecided as to a career goal, it the evidence is clear that strenuous efforts should be made early on to help this student explore and decide on career options. Such an activity can be regarded as preventative maintenance to high attrition.

Person-environment fit theory reinforces this finding, predicting that congruence between the person and the social environment results in satisfaction. Witt and Handel (1984) investigated whether person-environmental congruence has a stronger relationship than either personality or the environment alone to satisfaction. Their findings indicated the following:

Environmental perceptions had the strongest relationship to each component of satisfaction, with personality and congruency significant but weaker in their relationship to satisfaction (p. 507).

College programs, then, that promote student institutional fit from the beginning and programs, that promote student development and involvement in the institution are more likely to produce satisfied students. And recruiting types of students that best "fit" a certain environment will likely increase retention. These more satisfied students, in turn, should achieve their academic and personal goals more fully than those students who are not satisfied with the institution or its environment. This simple commonsense theory also seems consistent with and a companion to the Tinto theory, where student integration into the formal and informal academic and social systems of a college or university will determine leaving behavior. In view of these overarching findings about minority student retention and what has been proven helpful in helping minorities complete their education, these variables can be introduced, strengthened where needed, and expected to produce positive results. Listed next are a few significant of the more significant examples of barriers and of programs to help minority students overcome them and persist.

African-American Retention

A number of environmental issues can affect African-American retention, both positively and negatively. Peltier, Laden and Matranga (1999) report that having other African American roommates positively affected the grade point averages of African American men, whereas academic performance was enhanced for African American women when they were rooming with academically successful students. Schwartz & Washington (1999) note that African American women in particular face many hurdles to their success in

college. Some of the hurdles African-American women faces include low levels of parental support, limited resources to pay for college, low self-esteem and low social expectations for going to and completing a college degree. For both male and female African American students, lack of parental support and limited resources negatively affects college-going rate and retention. Many African American college students are first-generation and from single single-parent homes, do not have a positive parental role model. The economic condition for African Americans coming from lower-income groups is highly correlated with the ability to pay for and stay in college. This finding suggests the strong role that financial aid can play in recruiting, retaining, and graduating minority students.

Landry (2002-2003) observes that administrators at historically Black colleges and universities (HBCUs) list finances as a main reason for student departure from such institutions. Such families do not possess high income; many are first-generation, without the experiences of college-graduate parents, and such students are often unable to successfully navigate the cumbersome and complicated financial aid system. Without targeted assistance and services that such students need to be able to surmount the challenge of college, their survival rate may be adversely affected. Therefore, such students may drop out to work full-time and to return to college later on a part-time basis; both features accelerate minority retention.

For African American women enrolled in HBCUs, Schwartz & Washington (1999) concluded the following:

Issues of social adjustment, personal emotional adjustment, and the
identification of a strong support person along with demonstrated

academic success in high school, as measured by grades and rank in class, are critical for first-year African-American women (p.187).

Landry (2002-2003) found that, to overcome these problems, mentoring programs have been developed and successfully introduced whereby a faculty member meets with small groups of such students to help overcome institutional barriers. Big sister and brother programs are also helpful for first-time students of all ethnic backgrounds; ethnic-oriented clubs can also be helpful in the acculturation of students into the college community. Mentoring activities need to be introduced to reinforce more positive results, particularly for female students.

Financial considerations, as well as academic preparation and being the first in the family to attend college, are commonalities among most minority groups. And these variables, in turn, disproportionably affect these students. It is incumbent on the institution to know their "customers" and provide the necessary services to help them become successful.

American-Indian Retention

Peltier, Laden and Matranga (1999) showed that the persistence of American Indian students at a southwestern university were affected by academic preparations, aspirations, performance and interactions with faculty and staff. To help American Indian students persist, the university should be proactive in providing such services to these students, particularly providing help in academic preparation. In addition, early and continuous interaction with faculty and staff should also be facilitated. As noted earlier, studies emanating from the NSSE found that greater "engagement" by students with the institution and its faculty and staff enhance persistence. This study reinforces those findings.

Landry (2002-2003) points out that for American Indian students, formal education in an institutional sense can result in loss of language, family, and culture due to the forced assimilation and acculturation process that occurs. She notes that previous research concludes that Native American students who enter college and are well grounded in their cultural traditions have a greater chance of persisting to graduation than those who do not bring this foundation. Some colleges are successfully providing American Indian groups with precollege summer programs in an attempt to have students form lasting bonds with each other. Chapter Six in this volume points out some of the same type of benefits of summer programs to African American students. Culturally orientated groups and programs, then, can be helpful for Native Americans, as well as other ethnic group, to persist better in college by providing a celebration of cultural heritage, not a diminution of it.

Hispanic Student Retention

Walker and Schultz (2000-2001) point out that a study by Solberg, found three significant contributing factors to Hispanic student attrition: (1) being unprepared academically, (2) being away from families and lack of community, and (3) inadequate financial aid information and knowledge of how to apply for the aid. In addition, the inability of Hispanic students to perceive the long term benefits of education was a determent to retention. The authors recommend a cultural values-based retention model for Hispanic students that uses their cultural values to assist acculturation of Hispanic students into the college. Landry (2002-2003) also reinforces the notion that many Hispanic students come

from rural areas and possess a strong sense of place and locality; being away from home and familiarity can heighten attrition. A strong sense of place can be either a deterrent or a benefit to Hispanic students, and institutions need to compensate for its negative impact.

Lack of academic preparation is also a strong hindrance to most minorities, particularly so for Hispanics. Schmidt (2003) reports this:

> By the age of 17, Hispanic high-school students, on average, have the same reading and mathematics skills as white 13-year-olds. More than a third of the states recently surveyed by the National Center for Education Statistics said that their Hispanic students were significantly more likely than others to drip out of school. And those who earned their diplomas were less likely than their white peers to have taken rigorous college-preparatory courses such as Algebra II and chemistry (p. A9)

The failure to connect the completion of a college degree to greater value or the fear of incurring debt to complete an education is also an inhibitor for Hispanics, as well as other groups.

Raymund A. Paredes, vice president for programs at the Hispanic Scholarship Fund, the nation's largest private provider of scholarships to Hispanic students, says the shift from grants to loans "is having a very serious impact on the Latino community," which is relatively poor and leery of taking on debt. p. A9

As noted earlier, the failure to see the value of higher education inhibits those students from assuming increasing debt, as loans become a more common means of education. The U.S. Bureau of the Census indicates that a college graduate will earn an average of $1.2 million over his or her lifetime, as compared to the earnings of a high school graduate. Such knowledge needs to

be shared with these students and their parents, along with other benefits of college, as a vehicle to enhance recruitment.

Commonalities

There appears to be certain commonalities in the inability of American Indian, African American and Hispanic students to become successfully integrated into the academic and social life of colleges. These include a lack of academic preparation, lack of a critical mass of students with similar ethnic characteristics, and financial need. If such problems can be pinpointed, the institution can focus on solutions and disseminate them to potential target populations.

In some instances, for example, students with different ethnicity then the majority on campus are sometimes seen and assumed to represent all members of their particular culture and race. The comments or observations of a few members of an ethnic group are generalized to the total population. Members are asked questions relative to their particular culture, and their answers are held as broadly representative of their race or culture. Minorities, in general, find this pattern burdensome and onerous and do not want to be considered their race-culture representative to the college community. Such individuals generally want to receive an education and not be judged as a broad representative of their cultural heritage. This added burden on minority students interferes with their institutional acculturation and academic purpose. Fitting into the ethos of the college, then, seems to be a problem facing many minority students. Academic and social fit has been shown to affected college student retention.

Consider the findings of Watson and others (2002) regarding the campus culture:

> Many students expressed their enthusiasm concerning their institution's initial display of diversity and multiculturalism in the recruitment process, but then their subsequent disappointment with the reality of the monocultural campuses they found after enrolling at the institution (p. 53).

In addition, Schwartz and Washington (1999) point out that high school grades and rank remain one of the long-term significant predictors of academic performance regardless of race. The lack of sufficient financial aid presents a barrier to minority, as well as majority, students attending college. Also high school grades remain a better predictor of success in college for minority students then do standardized test scores. This finding suggests some de-emphasis of standardized test scores over high school grades in recruiting minorities may be in order.

There are other commonalities in the approaches to helping these students succeed. Because most colleges are populated by a majority of white students, the cultures of the colleges are, understandably, geared more for those students. Mentoring has been tried successfully by many colleges; also the formation of student groups and clubs for specific minority groups offers critical mass whereby ethnic students can sustain their cultural heritage and share it with like-minded students- all features that some literature findings suggest will help with the retention of such groups.

In addition, colleges are holding summer precollege programs for specific groups of minority students or minority groups together, so they can try to form positive habits and lasting bonds throughout their college and after-college

careers. Raab and Adam, in Chapter Six, describe the founding of and successful results from one such program that was designed primarily for minorities. Multicultural centers are another technique being employed to provide a safely net for minority students by providing a specific office- a point of contact- to go to in time of need, where a plethora of services are collected and provided to needy students. The key concept, it seems, is to have a place where students can go to find solace for their problems, of whatever nature. It is important, of course, that *all* students are aware that such a place exists and know where it is located.

A more inclusive and meaningful curriculum to which students can relate can be helpful for enhancing retention, as current or traditional curriculums often do not lend itself to dealing with a diverse culture or population (Landry, 2002-2003). Making available more institutional financial aid, grants and scholarships in preference to loans, is helpful as is assisting minority students, many of whom are first generation, in the financial aid application process. For first-generation college students, many of them unsophisticated in dealing with the "bureaucracy," the financial aid process becomes a burden too overwhelming to surmount.

In his book *What Makes Racial Diversity Work in Higher Education? (2004),* Hall concludes this way:

Institutions need to free themselves from worn out forms of engagement. Commitments should be made which stretch beyond the overall educational mission and focus on programs and activities that meet the

needs of particular campus populations. Such an approach requires time,

creativity, and commitment. The university can ill afford to overlook the

strengths and potential of those in who they have wisely invested; the

university must give students of color the support that a traditional student

would receive as a matter of course. As a matter of course, such students

may require *more* assistance then other students who have more

mainstream experiences and clearer goals (p. 19-20) [emphasis added].

Looking Ahead

Numerous programs can help recruit, retain, and graduate minority

students. Even though there are a plethora of programs and services to help

minority students succeed, a disparity in minority and majority retention rates

remains. For that matter, retention rates for all students has not improved

appreciably over time, despite the vast sums of money colleges have invested to

try to help all students succeed. What, specifically, can be done to help retain

students until they achieve academic and personal goal? A review of the

literature reveals a positive answer to this question. The commonalities can be

concentrated into a succinct but cogent formula.

In his forthcoming book, Seidman presents a retention formula using the

Tinto theory as a basis. He states succinctly: "For retention programs to be

successful, they must be powerful enough to effect change." Simply put, then,

$RET = E_{ID} + (E + In + C)_{IV}$. That is, RETention = Early $_{IDentification}$ + (Early +

Intensive + Continuous) $_{InterVention}$.

"Retention" is defined as student attainment of academic and/or personal goals, regardless how many terms a student is at the college. "Early identification" is identification at the earliest possible time a student is potentially at risk of not being successful academically and/or personally at the college. This process can also take place at the time of application (precollege) by a thorough examination of academic records and recommendations if collected. An examination of types of courses taken (or not taken) in high school, the difficulty of courses, and grades received would be helpful, as would the scores on standardized assessments such at the SAT or ACT. Also, the success rate (retention, graduation) of students from specific schools will offer some insight into the individual's potential for success. The number of times a student took the SAT or ACT and the scores achieved may also be predictive. But to reiterate, high school grades and courses are more fruitful for predicting success with minorities than standardized test scores. Reviewing written recommendations may reveal any academic or personal issues that may need to be addressed early on in providing needed intervention strategies for such students. Personal interviews with provisional students can provide insight into motivation, as can letters of recommendation. All these features suggest a labor-intensive process at the outset to provide for the needs of such students before failure intervenes.

Colleges have amassed a vast amount of information to help identify a student who may be at risk of not completing his or her program. Using existing student data, colleges can develop a profile of groupings of students who were unsuccessful or successful at the college. When a student applies and is

accepted and matched with a similar profile, logic dictates that that student will encounter comparable difficulties, and intervention strategies should be programmed into that student's program and experience at the *front end* of enrollment.

"Early intervention" is starting an intervention process at the earliest time possible upon identification of a problem. Successful efforts to work with students and parents in high school- even as early as the seventh grade- in terms of courses and parental commitment ("My child can go to college!") have proved to be very productive with minority students. Intervention programs and services need to be available as early in a student's college career as possible, preferably before they even consider college. Early and intensive intervention is providing an intervention strong enough to effect change. This feature also means developing intervention programs that closely monitor the student and have them demonstrate that he or she has mastered the skill or social factor or developed positive habits. Specific deficiencies in skill- sets may be identified early, and the student must master each skill- set to continue at the college or before moving to the next level. Again, the intervention must provide the student with a powerful enough experience so it is effective enough to produce the desired change in the student behavior- the earlier the better. "Continuous intervention" is an intervention that continues until the change is effected. Such an intervention can continue throughout the student's college career and beyond.

This formula means that for a college to retain a student, he or she must be identified as early as possible as a student in need of help; what kinds of help

needed must be determined as well, whether academic or socially or both. This can mean starting an intervention program even before enrollment, as early as high school, having the acceptance contingent upon the student successfully completing certain preparatory interventions that would enhance the likelihood of success. A written contract between the student and the institution, although not legally binding, provides some sense of legitimacy and validity to the demands on such students. The intervention program needs to be started as early as possible in the student's educational career and be intensive enough and continue until a change is effected, whether that takes one or eight terms or more. The U.S. government's GEAR UP program rightfully focuses on starting with such students in the seventh grade, gearing (preparing) them for college.

Providing this type of early identification and intervention throughout a student's precollege and college career enhances the chances of student success in meeting academic and personal goals. And, that is what the educational process is all about- enabling a student to accomplish individual goals, to compete in the global economy, and seek out continuing education as necessary without the fear of failure. The patterns for success are clearly delineated in a body of literature that can be adapted to creating a successful program.
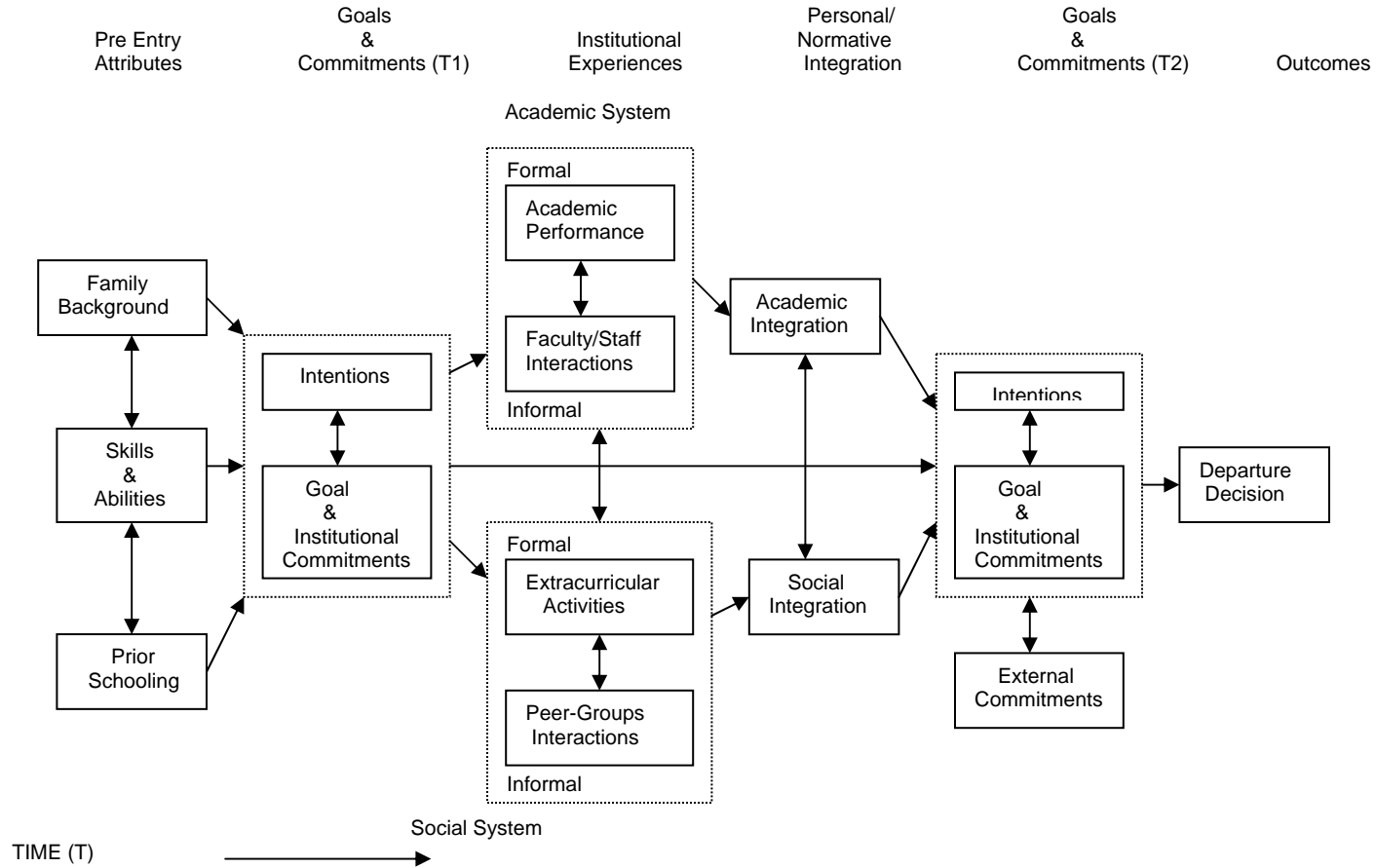
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Figure 1.1

TINTO MODEL OF INSTITUTION DEPARTURE

Pre Entry Attributes

Goals & Commitments (T1)

Institutional Experiences

Personal/ Normative Integration

Goals & Commitments (T2)

Outcomes

Academic System

Formal

Academic Performance

Family Background

Faculty/Staff Interactions

Informal

Intentions

Academic Integration

Intentions

Skills & Abilities

Goal & Institutional Commitments

Departure Decision

Goal & Institutional Commitments

Formal

Prior Schooling

Extracurricular Activities

Social Integration

External Commitments

Peer-Groups Interactions

Informal

Social System

TIME (T)

Source: Tinto, V. (1993). 2nd Edition. Leaving college: Rethinking the causes and cures of student attrition.
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